REMARKS

In the Office action mailed May 12, 2004, claims 22-30 were rejected under 35 U.S.C. 103(a) based on Kemp et al. (US 2001/0047251) and Isherwood et al. (US 5918219).

Applicant thanks the Examiner for granting a telephone interview on June 29, 2004, and resubmits claims 22-30 without revision in view of the points discussed therein. Applicant believes that the claims are drafted in a manner consistent with the arguments made during the last interview with the Examiner. If the Examiner thinks that there is any specific language that would make the claims allowable he should provide constructive assistance and write an allowable claim.

Applicant believes that neither Kemp nor Isherwood teach a method for generating a self-directed structural profile from a plan set representing a physical description of a building (post-designed) at a given point in time. Kemp is strictly focused on the design phase of construction, utilizing the form of an "expert system" dialog to automate the creation of a 3D design with pre-defined 3D objects; Structural Profiling is concerned with processing the output of the design phase, whether generated by a Kemp-driven process or conventional architect/designer plan set, and creating a permanent, dynamic framework that describes the structure throughout its life span. Although Kemp mentions that information can be stored permanently [0155], it is still entirely concerned with the original design phase of a project, and in no way operates as a stand-alone, self-directed interactive profile that reflects the additions and modifications to a structure throughout its lifespan. The Kemp approach is narrowly bound to the designer [0020] of the 3D model and 2D production drawings, whereas our method is dynamic and open to modification by a broad range of

data stores and participants. Isherwood on the other hand teaches a method of applying aggregated historical data and templates, and making them available via a computer, to improve the bid estimating process; this approach is strictly pre-construction, and relies on static information that may or may not be manually updated from time-to-time. Isherwood falls short of the concept of a dynamic profiling engine, interfaced with material, service and product databases, that serves as an ongoing "living" information framework for a structure throughout its useful life.

Kemp teaches [0003] the use of intelligent symbolic 3D componentmodeling to design 3D models. Kemp describes a multi-stage pre-design service primarily concerned with designing a 3D model via pre-defined 3D objects, similar to the advent of object-oriented programming in the software development industry that utilizes "tried and true" code object libraries to speed application development. To carry this comparative analogy further, structural profiling would be akin to incorporating a completed application software package (the output of a Kemp-based process) within a broader "system solution" that comprises many components including business analysis, customization, software/hardware integration, training, on-going support/maintenance, and so on. Kemp is entirely concerned with design, while structural profiling is entirely concerned with the (post-design) construction and evolution of the building over its life span.

As a first step, Kemp elicits general project information via a scripting process. They do not receive a 2D plan set (post-design) for conversion into a structural profile.

Kemp contrasts his invention [0005] with conventional CAD use. Kemp's invention is more concerned with aiding in the design process by generating a 3D model, rather than

the conventional use of lines, arcs, circles used to describe walls, floors, roofs, windows, doors, etc. The latter according to Kemp does not directly aid in the design process but can only automate the drafting process. Kemp uses pre-made 3D graphic parametric objects [0048, 0050] that are the building blocks of the inventive CAD system. Our invention does not require pre-configured 3D objects to profile a structure.

After Kemp's 3D components are added to a project, an expert knowledge system reviews the model against heuristic rules and for conflicts with component manufacturer specifications and building codes. The end result is a 3D CAD model. Kemp only discusses 2D dimensional CAD projections as a byproduct, they do not precede the design of a 3D model; they are projections cut from a 3D model in the form of floor plans, sections and elevations [0017, 0019, 0020, 0038, 0039]. In contrast, we firstly do not use heuristic rules, and secondly we process 2D post-design plan sets. Kemp is essentially replacing the architect, while we use a plan set as input whether it comes from Kemp, an architect or another source. We profile plan sets (post-design - pre/post-construction) that are submitted to the profiling engine by way of a computer network. Any pre-construction modifications made to a post-design structure would still be classified as a design change. It is well known characteristic of construction planning to persistently address design considerations throughout the pre/post-construction phase. However any post-design modifications would only amend the initial design, it would not constitute the pre-design objective taught by Kemp.

Kemp discusses the different types of building components, which are common to all types of buildings and some that are unique to the function of the building such as a hospital

[0049]. He then goes on to list common components. Kemp is not referring to a plan set representing a physical description of a building; Kemp is simply providing background information. Kemp stresses the importance of 3D model components having graphic and database characteristics because the 3D components mentioned are essential to his invention. This differs dramatically from our approach because we do not rely upon nor do we require any pre-defined 3D components.

Kemp is designing a 3D model through a speech synthesis and voice recognition system that controls the design session [0018, 0061]. Kemp is focusing on automating the design process, not processing an already-designed plan set (post-design) for interactivity. It is not possible to generate a profile of a structure that has not been designed. Kemp's sample of a typical design dialogue clearly suggests the objective of his invention [0062].

Kemp is designing a building, not generating an interactive structural profile from an existing plan set. Kemp's method radically differs from ours, requiring the user to literally build a structure component by component. In our domain, existing homeowners would not redesign their entire home from the ground up using a Kemp-based program if they want to view their structure interactively. Our invention allows pre and post-construction clients to fully profile their home without the need of redesigning the entire structure from scratch. This was not obvious to Kemp – he does not mention the term post-design once in his specification.

Kemp's third module provides the ability to convert the 3D model into 2D production drawings or construction documents [0017, 0019, 0038]. The 2D drawings do not precede the 3D model, they are a product of the 3D model. Our invention is the reverse

of this. This was clearly not obvious to Kemp. His objective is to interactively design a 3D model [0021]. We are generating an interactive structural profile of a building that may be viewed two dimensionally, three dimensional or in data only form. We do not require 3D objects to build an interactive structural profile, whereas Kemp does require 3D objects to design a model.

Kemp is interactively designing a 3D model that can be documented by way of 2D drawings [0016]. Kemp does not generate an interactive structural profile from a post-design architectural plan set.

The structural profile is derived from a plan-set (post-design) for pre/post-construction mapping of all the component parts that define a coherent structure. It also progressively captures all the details that define finishings, furnishings and systems that are associated to individual components. This profile may be managed by AEC professionals, suppliers, post-construction service professionals and homebuyers/homeowners. The structural profile is a stand-alone framework of the structural/component interrelationships, measurements, parameter requirements and options defining a post-design structure. Kemp is concerned with the 3D object relationships (design-time) such as how they are connected, orientated, movement, etc. We convert 2D CAD entities (post-design plan set) into an interactive structural profile. Structural profiling can occur in less than a minute via computer software, while Kemp [0037] suggests 4-6 hours to complete a design.

Kemp converts the verbal design criteria into 3D graphic presentations and displays them on the client terminal's computer screen for the user to review and change at will. Kemp does not discuss any interactive use after the structure has been fully designed and

built. In contrast, our post-design structural profile is to be used pre/post-construction. We provide examples in the specification as to how the structural profile may be progressively managed and used long after the building has been built. The reference [0050] does not represent a post-design structural profile. It is simply a repository of pre-defined graphic and database characteristics associated with 3D model components, which are essential for integration with other elements (during design-time).

Kemp and Isherwood deal with construction, however combining their collective processes does not address the objective of our invention, which is to generate a structural profile based on a post-design physical plan set for use over the life span of a building (pre/post-construction). Modifying Kemp to incorporate a distinctive estimation method as taught by Isherwood would still fall short of producing an interactive profiling system. Isherwood's estimation method is not equivalent to a structural profile. However, as suggested by the examiner on page 6 of the office action, it might improve the overall efficiency of Kemp's system.

Isherwood has devised an estimation method based on historical data blocks. Our invention does not rely on or require historical data blocks to produce a preliminary estimate. We simply deconstruct the profile into quantifiable component parts and assemblies based on the profile of the building via parameter logic. Isherwood relies on historical data blocks and does not directly relate to the physical description of a 2D plan set. Isherwood requires an estimator to measure the plan then select the closest Block [col. 4; line 60]. Isherwood cannot automate the Block selection based on a post-design plan set. Isherwood can link to the actual material list details, but this is not based on an interactive

profile of a building [col. 4; line 52]. In fact, Isherwood never mentions the term profile in any form. This prior art has no interconnection with our invention because it works on an entirely different premise. It would also be difficult to imagine how Isherwood and Kemp could collaborate, since Kemp is already defining 3D model characteristics via a database [0050]. Neither Kemp nor Isherwood can profile a physical plan set (post-design).

Regarding building code servers, Kemp only states that they will be accessible through the server [0143]. Kemp does not articulate or describe how the codes interrelate with the 3D objects, or if it is for reference only. Claim 24 clearly teaches how our building codes can flag post-design incompatibility.

As for claim 25, Kemp only provides background information constituting interior design components; Kemp does not verify if the furnishings are in any way compatible with a given structural profile.

As for claim 26, this preliminary estimate is not based on historical data blocks as taught by Isherwood. It would be impossible to obtain a dynamic estimate based on Isherwoods estimation method. Isherwood requires someone to measure the plan before selecting the appropriate blocks. Even if this could be automated, it still would not produce a structural profile.

As for claim 27, Isherwood uses templates. They do not profile a post-design structure. This is the primary reason for using historical data blocks. The function of the material database in our invention is to provide a full array of up-to-date compatible materials based on the post-design profile and as a result the generation of a preliminary estimate based on associated selections made directly by the end-user. Regarding our

invention, the material database is separated from the structural profile; this does not appear to be the case with Isherwood. Materials are collected and recorded within the data blocks [col. 4; line 15]. Isherwood is limited by templates and historical data blocks, thus this method of appropriating materials would not support perpetual dynamic profiling.

Kemp does provide limited interaction with some CAD components [0150], however the objective is not to generate a structural profile from a plan set, instead it asks the user to provide dimensions of highlighted portions of the component for further evaluation by the design heuristic engine. This feature is clearly intended to support the overall design process. This feature on its own cannot produce an interactive structural profile.

Our invention is a post-design profiling service, not another CAD system. We create a progressive profile of the structure beginning with a physical description of a structure (via a plan set) and further defined and propagate the profile (pre/post-construction) between the associated professionals and owners for various tasks throughout the life span of the building.

The structural profile ultimately becomes a stand-alone, self-directed framework that coherently describes the structure and all its components as prescribed by various players (i.e. architect, builder, supplier/retailer, interior designer, insurer, appraiser, service professionals, owner, etc.). It becomes a medium of communication between all the disciplines that collaborate to build and maintain a structure – anytime, anywhere.

Applicant believes that the claims are allowable, because, among other reasons, none of the cited references disclose or suggest a system or method that includes an electronic

profile of a user's building, such as a home, as it existed at the time of construction, and which also enables the user to input post-construction details regarding various assets in the home, such as light fixtures, paint, window treatments, that were installed in the building after the construction of the building. Further, none of the references disclose or suggest such a system or method that further includes a build-to-order application based on an interactive profiling engine, configured to enable an authorized user to request a preliminary estimate for a construction or remodeling project, based on a stand-alone, self-directed structural profile, as updated by the user with pre/post-construction assets. These features have the advantage in that they enable a user to manage a progressively dynamic profile of his home or other building, which may be updated as the building is updated, and which may serve as an aid in estimating the materials, cost, fixtures, furniture, etc., required for a particular building or remodeling project over the life span of the structure.

The above amendments and remarks are believed to address fully the Examiner's rejections, and place the application in condition for allowance. The applicant believes claims 22-30 are allowable. A prompt indication of the same is respectfully requested. The Examiner is encouraged to fax the undersigned at 1 (949) 666-5282 to arrange a telephonic interview to resolve any issues preventing allowance.

CERTIFICATE OF MAILING

I hereby certify that this correspondence was faxed to: (703 872-9306) Commissioner for Patents, P.O. Box 1450 Alexandria, Virginia 22313, on July 27, 2004.

John Allen Ananian

John Allen Ananian
Date of Signature: July 27, 2004

Respectfully submitted,
JohnAllen Ananian

John Allen Ananian

NewerHome Technologies, Inc.
8029 Northwind Drive
Lantzville, B.C. VOR 2HO
Canada

Telephone: (250) 390-3585
Facsimile: (250) 390-3595
john@newerhome.com